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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,120	03/08/2007	Bruce Batchelder	020354 171P2	1219
33805 7590 12/08/2010 WEGMAN, HESSLER & VANDERBURG 6055 ROCKSIDE WOODS BOULEVARD SUITE 200 CLEVELAND, OH 44131				
EXAMINER				
PHASGE, ARUN S				
ART UNIT		PAPER NUMBER		
1724				
MAIL DATE		DELIVERY MODE		
12/08/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/577,120

**Applicant(s)**

BATCHELDER ET AL.

**Examiner**

Arun S. Phasge

**Art Unit**

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

**DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

Claims 1-7, 25-27 stand rejected under 35 U.S.C. 102(B) as being anticipated by Mani of record for reasons of record.

Mani discloses the claimed fluid treatment line and system comprising a plurality of electrodialysis units arranged in stages to each receive a feed flow to be treated and a concentrate flow, wherein at least one stage includes one or more filled cell electrodialysis (EDI) units, with the feed flow in an order opposite to that of the concentrate flow (see figure 9). The patent teaches the control of such characteristics as electrical conductance or resistances (see col. 15, lines 25-33).

Mani further discloses the claimed method and apparatus for the electrodialysis treatment comprising a plurality of electrodialysis treatment units, said treatment units being configured for connection so as to receive a feed flow of feed fluid that is to be treated, and so as to receive a flow of concentrate fluid that is to receive material removed from the feed flow during treatment in said treatment units, a plurality of fluid

connections interconnecting said treatment units in stages along the treatment line such that the feed fluid proceeds sequentially from a first stage along the treatment line such that feed fluid proceeds sequentially from a first stage to one or more later stages, and concentrate proceeds in an opposite sense from a later stage to one or more earlier stages of the treatment line (see figures 8-9 and claims 1-26).

Accordingly, since the Mani patent discloses each and every limitation, the claims are anticipated.

***Claim Rejections - 35 USC § 103***

Claims 8-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mani as applied to claims above, and further in view of Gallagher et al. (Gallagher), U.S. Patent 5,736,023.

The Mani patent discloses the treatment of biological material (see claims 1-26). Although the patent uses the same voltage of potentials in the subsequent stages, the patent teaches that other modes of operation are within the purview of the ordinary artisan in commercial operation (See col. 11, lines 31-41).

The reference further discloses the use of cleaning as claimed, wherein the range of the solution appears within the claimed range, to allow the continued use of

the cell (see col. 18, lines 3-68). However, the patent fails to disclose that the cleaning occurs by a reverse flow through the cell as claimed. The patent further fails to teach the use of sensors and controllers as claimed.

The Gallagher patent is cited to show the use of a reverse direction of flow of the fluid during the reversal mode of operation (see col. 7, lines 26-44). The patent teaches the use of a sensor as claimed (see col. 22, lines 38-53). The patent further teaches the use of a controller as recited in the claims (see col. 22, lines 27-36). The Gallagher patent further teaches the use of valves and pumps and the controllers (see figure 1 and col. 11, lines 9-26 and col. 22, lines 27-37).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Mani the teachings of Gallagher.

One having ordinary skill in the art would have been motivated to do this modification, because Gallagher teaches the modification to electrodeionization process and apparatus to allow the high-quality product fluid to be obtained.

### ***Response to Arguments***

Applicant's arguments filed 9/23/10 have been fully considered but they are not persuasive.

Applicants appear to be arguing that the Mani patent does not do the same thing that the presently claimed invention, i.e., "balance a characteristic of the feed and concentrate flows in the units."

It has been well settled that such "intended use" limitation fail to structurally define the invention to differentiate the claimed invention from the prior art apparatus.

The Board of Patent Appeals and Interferences in *Ex Parte Masham*, 2 USPQ 2d 1647 (1987) stated, "a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of the claimed." The device "does not undergo a metamorphosis to a new apparatus merely by affixing instructions thereto on the use."

Accordingly, the claims stand rejected.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Phasge whose telephone number is (571) 272-1345. The examiner can normally be reached on MONDAY-THURSDAY, 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Arun S. Phasge/  
Primary Examiner, Art Unit 1724

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